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EXAMINER	
WHIPPLE, BRIAN P	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/655,692	HASHIMOTO, AKIYOSHI	
	Examiner	Art Unit	
	Brian P. Whipple	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 September 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/14/03 and 12/20/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-14 are pending in this application and presented for examination.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Claim 10 fails to meet this requirement. Therefore, the file control unit comprising setting means that allow a manager of said file server system to set a ratio of an amount of data transferred in a communication between said file control unit and said clients to an amount of data transferred in a communication between said file control unit and said hard disk drives and wherein the amount of data transferred in the communication between said file control unit and said clients and the amount of data transferred in the communication between said file control unit and said hard disk drives are measured to control a priority of communication processing so that a ratio that is obtained by the measured data amounts approaches the ratio that is set must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. Claims 1 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis et al. (Hubis), U.S. Patent No. 6,343,324 B1, in view of Igari, U.S. Patent No. 6,742,094 B2.

4. As to claim 1, Hubis discloses a file server system (Col. 1, ln. 23-26) comprising:

a plurality of hard disk drives connected to a plurality of clients via a network (Col. 7, ln. 22-30); and

a file control unit connected to the network for accepting an access request from said clients to said hard disk drives to manage the data input/output of said plurality of hard disk drives (Fig. 1; Col. 7, ln. 65 – Col. 8, ln. 2; Col. 8, ln. 43-48),

wherein said file control unit has configuration information with which a plurality of pieces of identification (ID) information, each identifying one of said plurality of hard

disk drives, can be registered (Col. 2, ln. 39-56; Col. 2, ln. 64 – Col. 3, ln. 3; Col. 10, ln. 31-41) and

wherein, in response to the returned ID information, said file control unit establishes a setting such that the hard disk drive, which has returned the ID information, cannot communicate with devices on said network other than said file control unit (Fig. 1; Fig. 3B, items 323-325; Col. 15, ln. 32-40).

Hubis is silent on said file control unit broadcasts a hard disk drive search message via said network,

wherein, in response to the hard disk drive search message, said hard disk drive returns the ID information specifying the self hard disk drive to said file control unit.

However, Igari discloses said file control unit broadcasts a hard disk drive search message via said network (Col. 4, ln. 49-53),

wherein, in response to the hard disk drive search message, said hard disk drive returns the ID information specifying the self hard disk drive to said file control unit (Col. 4, ln. 49-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis by locating a hard disk drive by searching for and returning hard disk drive ID information as taught by Igari in order to transfer data and information from a hard disk drive to a requesting host system (Igari: Col. 4, ln. 49-53).

5. As to claim 7, Hubis and Igari disclose the invention substantially as in parent claim 1, including said hard disk drive comprises authentication information with which identifiers of part or all devices connected to said network and authentication codes corresponding to the identifiers of the devices can be registered, said identifiers being used on said network and wherein, upon receiving a communication permission from a device on said network, said hard disk drive compares an authentication code sent by the device with the authentication codes registered with the authentication information, permits communication if a match is found, and inhibits communication if a match is not found (Igari: Col. 3, ln. 55-63; Col. 4, ln. 13-24).

6. As to claim 8, Hubis and Igari disclose the invention substantially as in parent claim 7, including said hard disk drive changes the authentication information according to an authentication information-change instruction received via said network (Hubis: Col. 19, ln. 10-19; Igari: Col..6, ln. 66 – Col. 7, ln. 6).

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis and Igari as applied to claim 1 above, and further in view of Pherson et al. (Pherson), U.S. Publication No. 2002/0095602 A1.

8. As to claim 2, Hubis and Igari disclose the invention substantially as in parent claim 1, including a file control unit (Hubis: Fig. 1, item 104), but are silent on a management terminal connected to said file control unit to perform maintenance work.

However, Pherson discloses a management terminal connected to said file control unit to perform maintenance work ([0022]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis and Igari by including a management terminal as taught by Pherson in order to allow a system manager to explicitly define access (Pherson: [0022]).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis, Igari, and Pherson as applied to claim 2 above, and further in view of Nahum, U.S. Publication No. 2004/0078599 A1.

10. As to claim 3, Hubis, Igari, and Pherson disclose the invention substantially as in parent claim 2, but are silent on a firewall connected between said file control unit and said hard disk drives for controlling communication between said management terminal and said hard disk drives.

However, Nahum discloses a firewall connected between said file control unit and said hard disk drives for controlling communication between said management terminal and said hard disk drives (Fig. 1 and 12; [0027]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis, Igari, and Pherson by including a firewall as taught by Nahum in order to ensure security between the hard disk drives and systems, including the management system.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis, Igari, and Pherson as applied to claim 2 above, and further in view of Daoud et al. (Daoud), U.S. Publication No. 2002/0087694 A1.

12. As to claim 4, Hubis, Igari, and Pherson disclose the invention substantially as in parent claim 2, including a file control unit (Hubis: Fig. 1, item 104) and communication with a management terminal (Pherson: [0022]), clients (Hubis: Fig. 1, items 101-1, 101-2, 101-3, and 120), and hard disk drives (Hubis: Fig. 1, items 108-1, 108-2, 108-3, 108-N, and 122; Col. 7, ln. 22-30).

Hubis, Igari, and Pherson are silent on a priority unit that puts a higher priority on communication with said management terminal than on other forms of communication.

However, Daoud discloses a priority unit that puts a higher priority on communication with said management terminal than on other forms of communication ([0027]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis, Igari, and Pherson by putting a higher priority on communications with a management terminal as taught by Daoud in order to ensure that packets sent from an administrator using administration tools are given a higher priority as such changes may be desired by the administrator to be implemented as soon as possible as to prevent the network from being run any longer on the old settings.

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis and Igari as applied to claim 1 above, and further in view of Pham et al. (Pham), U.S. Publication No. 2003/0105830 A1.

14. As to claim 5, Hubis and Igari disclose the invention substantially as in parent claim 1, including said file control unit (Hubis: Fig. 1, item 104) and said plurality of hard disk drives (Hubis: Fig. 1, items 108-1, 108-2, 108-3, 108-N, and 122; Col. 7, ln. 22-30).

Hubis is silent on said file control unit and said plurality of hard disk drives have an iSCSI internet small computer system interface (iSCSI) interface for communication on the network using the internet protocol (IP).

However, Pham discloses that an iSCSI internet small computer system interface (iSCSI) interface for communication on the network using the internet protocol (IP) is well known in the art ([0008]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis and Igari by utilizing an iSCSI interface as taught by Pham in order to combine the benefits of IP remote transport and the reliable quality of service provided by the TCP protocol with storage transaction session control under the SCSI protocol (Pham: [0008]).

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis and Igari as applied to claim 1 above, and further in view of Nahum.

16. As to claim 6, the claim is rejected for the same reasons as claim 3 above. The firewall between the system administrator and the hard disk drives is a device that inhibits or permits communication.

17. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis and Igari as applied to claim 8 above, and further in view of Phillips et al. (Phillips), U.S. Publication No. 2002/0091805 A1.

18. As to claim 9, Hubis and Igari disclose the invention substantially as in parent claim 8, including said file control unit (Hubis: Fig. 1, item 104) and the authentication information-change instruction (Hubis: Col. 19, ln. 10-19; Igari: Col. 6, ln. 66 – Col. 7, ln. 6), but are silent on said file control unit issues the authentication information-change instruction to said hard disk drive at system startup time to inhibit said hard disk drive from communicating with devices other than said file control unit.

However, Phillips discloses said file control unit issues the authentication information-change instruction to said hard disk drive at system startup time to inhibit said hard disk drive from communicating with devices other than said file control unit ([0067]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis and Igari by issuing an authentication

information-change instruction at system startup as taught by Phillips in order to ensure systems are secure upon startup (Phillips: [0067]).

19. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis and Igari as applied to claim 1 above, further in view of Sutherland et al. (Sutherland), U.S. Publication No. 2002/0114341 A1, and further in view of Blackwell et al. (Blackwell), U.S. Publication No. 2002/0188748 A1.

20. As to claim 10, Hubis and Igari disclose the invention substantially as in parent claim 9, including said file control unit (Hubis: Fig. 1, item 104) and said plurality of hard disk drives (Hubis: Fig. 1, items 108-1, 108-2, 108-3, 108-N, and 122; Col. 7, ln. 22-30).

Hubis and Igari are silent on setting a ratio of an amount of data transferred in a communication between said file control unit and said clients to an amount of data transferred in a communication between said file control unit and said hard disk drives and wherein the amount of data transferred in the communication between said file control unit and said clients and the amount of data transferred in the communication between said file control unit and said hard disk drives are measured to control a priority of communication processing so that a ratio that is obtained by the measured data amounts approaches the ratio that is set.

However, Sutherland discloses said file control unit comprises setting means that allows a manager of said file server system to set a ratio of an amount of data transferred in a communication between said file control unit and said clients to an

amount of data transferred in a communication between said file control unit and said hard disk drives and wherein the amount of data transferred in the communication between said file control unit and said clients and the amount of data transferred in the communication between said file control unit and said hard disk drives are measured ([0057]; [0092]; [0115]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis and Igari by allowing a manager to set the ratio of data transferred regarding clients and hard disk drives as taught by Sutherland in order to allow a manager to allocate minimum and maximum thresholds for storage in response to a number of variables for maximum control over a network (Sutherland: [0057]; [0092]).

Hubis, Igari, and Sutherland are silent on controlling a priority of communication processing so that a ratio that is obtained by the measured data amounts approaches the ratio that is set.

However, Blackwell discloses controlling a priority of communication processing so that a ratio that is obtained by the measured data amounts approaches the ratio that is set ([0058]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis, Igari, and Sutherland by controlling a priority of communication processing so that a ratio that is obtained by the measured data amounts approaches the ratio that is set in order to avoid bottlenecking (Blackwell: [0058], ln. 1-5).

21. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubis, in view of Igari, in view of Pherson, in view of Moulton et al. (Moulton), U.S. Patent No. 7,062,648 B2.

22. As to claims 11 and 13-14, the claims are rejected for the same reasons as claim 1 above. Hubis and Igari are silent on the use of hubs and VPNs, but these are well known in the art and obvious design choices. Additionally, Pherson discloses hubs in a storage network ([0009]) and Moulton discloses the use of VPNs in a storage network (Col. 10, ln. 24-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hubis and Igari by utilizing hubs and VPNs as taught by Pherson and Moulton respectively as both are well known in the art and standard means of providing for network communication.

23. As to claim 12, the claim is rejected for the same reasons as claims 2 and 11 above.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the Notice of References Cited (PTO-892).

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Whipple whose telephone number is (571) 270-1244. The examiner can normally be reached on Mon-Fri (8:30 AM to 5:00 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BPW

Brian P. Whipple
6/20/07

6/21/7

BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER